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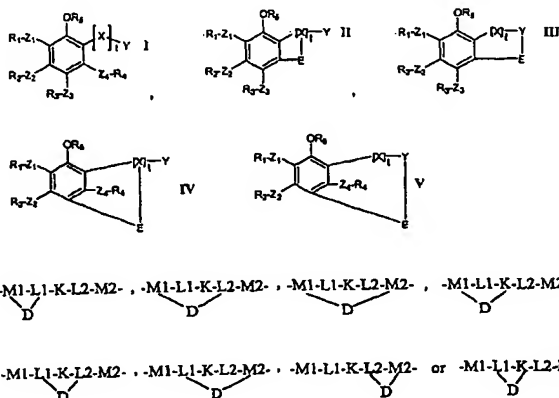
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[Continued on next page]

(54) Title: PHENOL DERIVATIVES AND THEIR USE AS ROTAMASE INHIBITORS



(57) Abstract: The present invention is related to a compound of the formula (I), (II), (III), (IV), (V): wherein Z₁, Z₂, Z₃ and Z₄ are each and independently selected from the group comprising C(O)-, -C(S)-, -C(O)-NR₁₀-, -C(S)-NR₁₁-, -C(N-CN)-NR₁₂-, -S(O)-, -S(O₂)-, -S(O)-NR₁₃-, and S(O₂)-NR₁₄-, -O-, -S- or are each and individually absent; X is a spacer and is independently selected from the group comprising -M1-L1-K-L2-M2-, wherein Y is selected from the group comprising alkyl, substituted alkyl, straight alkyl, substituted straight alkyl, branched alkyl, substituted branched alkyl, straight alkenyl, substituted straight alkenyl, branched alkenyl, substituted branched alkenyl, straight alkynyl, substituted straight alkynyl, branched alkynyl, substituted branched alkynyl, cycloalkyl, substituted cycloalkyl, cycloalkenyl, substituted cycloalkenyl, heterocyclyl, substituted heterocyclyl, mono-unsaturated heterocyclyl, poly-unsaturated heterocyclyl, mono-substituted poly-unsaturated heterocyclyl, poly-substituted poly-unsaturated heterocyclyl, mono-substituted mono-unsaturated heterocyclyl, poly-substituted mono-unsaturated heterocyclyl, aryl, substituted aryl, heteroaryl and substituted heteroaryl, wherein Y is different from a peptide or is absent.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

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PCT/EP 03/10406A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07C275/34 C07C335/18 A61K31/17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/059080 A (GUILFORD PHARMACEUTICALS INC.) 1 August 2002 (2002-08-01) page 104 - page 119; claims 1-63	1-183
X	WO 02/44126 A (GUILFORD PHARMACEUTICALS INC.) 6 June 2002 (2002-06-06) page 104 - page 140; claims 1-84	1-183
X	WO 01/017953 A (GUILFORD PHARMACEUTICALS INC.) 15 March 2001 (2001-03-15) page 33 - page 51; claims 1-94	1-183
Y	WO 98/37882 A (GUILFORD PHARMACEUTICALS INC.) 3 September 1998 (1998-09-03) page 37 - page 49; claims 1-24 -/-	1-183

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

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- *E* earlier document but published on or after the International filing date
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *G* document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 242 468 B1 (JIA-HE LI ET AL.) 5 June 2001 (2001-06-05) column 1 - column 7, line 2 -----	1-183
Y	US 2002/049199 A1 (GREGORY S. HAMILTON ET AL.) 25 April 2002 (2002-04-25) page 1, column 1 - page 3, column 1 -----	1-183
Y	US 5 744 485 A (ROBERT EDWARD ZELLE ET AL.) 28 April 1998 (1998-04-28) column 1 - column 5, line 52 -----	1-183

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/10406

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-183 (incompletely)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: -

Present claims 1-183 relate to an extremely large number of possible compounds and compositions for use. In fact, the claims contain so many options, variables, that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely those compounds recited in the examples and closely related homologous compounds Formula 1, where $X = -(CRR)-NR-CO-NR-CRR, -(CRR)-NR-CS-NR-(CRR)$.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/10406

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International Application No

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